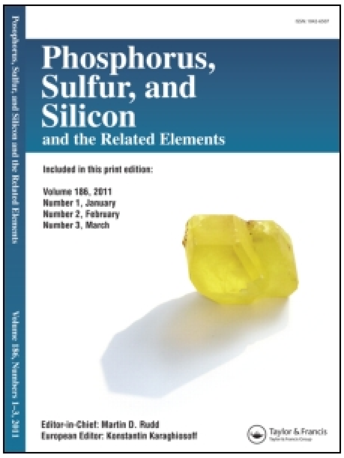

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Transition Metal Chemistry of Diphosphazanes and Diphosphazane Monosulfides

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Transition Metal Chemistry of Diphosphazanes and Diphosphazane Monosulfides

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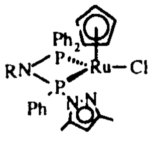
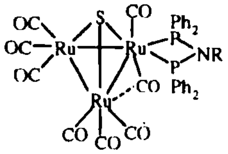
The reactions of chiral diphosphazanes, $Ph_2PN((S)\text{-}^*CHMePh)PPhY$ ($Y{=}Ph$, $N_2C_3HMe_2\text{-}3,5$) with $[CpRu(PPh_3)_2Cl]$ and those of the monosulfides, $Ph_2PN(R)P(S)Ph_2$ ($R = (S)\text{-}^*CHMePh$ or $CHMe_2$) with $Ru_3(CO)_{12}$, $[RhCl(cod)]_2$ and $[RhCl(CO)_2]_2$ have been investigated. Molybdenum-palladium heterometallic complexes of the diphosphazanes, $MeN\{P(OR)_2\}_2$ ($R = CH_2CF_3$ or Ph) have been synthesised. Some unusual complexes have been obtained by the reductive carbonylation of cobalt and ruthenium halides in the presence of diphosphazanes, $RN\{PX_2\}_2$ ($R = Me$, $X = OCH_2CF_3$ or OPh ; $R = CHMe_2$, $X = Ph$). The structures of the products have been elucidated by NMR spectroscopy and in some cases confirmed by X-ray crystallography (e.g., **1**-**4**).

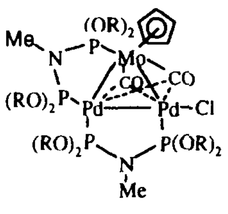


1



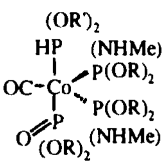
2

R = (*S*)-*CHMePh



3

R = Ph



4

R = CH_2CF_3

R' = CH_2CH_3